Nutrition News

PUBLISHED BY NATIONAL DAIRY COUNCIL · CHICAGO

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NEEDLESS NUTRITIVE FAILURE

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Tuberculosis is bad and cancer is worse, but, as another writer aptly puts it, the greatest tragedy that comes to man is the emotional depression, the dulling of the intellect and the loss of initiative that comes with nutritive failure. This is preventable.

The inability to secure sufficient food is commonly believed to be the chief cause of nutritive deficiency but in America this is not true. Obviously, poverty may be so acute that sufficient food is not available, but such conditions are fortunately rare, and in this country at least deficiency status depends most often upon other factors. Among these may be listed ignorance in the choice of food, perversity of appetite, faddism, the increased requirements which come from illness or physiologic strain, and, because of some defect in the individual, inadequate absorption and utilization. The last of these has no place in this discussion, but the other factors are all of importance.

The most important of these is ignorance. This applies with special force to the person of slender means who in order to get all nutritive essentials in adequate amounts must exercise intelligent selection, even painstaking care, in the purchase of food. She (for it is the housewife who is chiefly concerned) must know something of food values. She must know the great value of milk, the excellence of its proteins, the need for the calcium which it supplies and the bargain which it offers in food values. She must know too the value of fruits and green vegetables, and in her efforts at economy she must appreciate the fact that while foods should present a pleasing appearance on the table, attractiveness in the market is seldom worth the money it brings. She should understand the wisdom of Sherman's advice that: (1) at least as much be spent for milk (including cream and cheese if used) as for meats, poultry and fish, and

Doctor McLester

(2) at least as much be spent for fruits and vegetables as for meats, poultry and fish. If the housewife knows all of this, then, even though her budget be small, the nutrition of her family is not likely to suffer.

Less easily disposed of is the nutritive deficiency which comes from faddism, lack of appetite and perversion of taste. This applies not only to children and adults who have accustomed themselves to one-sided diets but to others also. Sometimes it is the part of a vicious circle: a passing illness or emotional upset destroys the appetite; the person then eats less and perhaps unwisely; this deprives the body of nutritive essentials which in turn still further impairs the appetite, and there is thus established a vicious circle. Permitted to continue, this will lead first to functional derangement and then to structural damage.

Of great importance, too, is the increase in nutritive requirements caused by illness

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OCTOBER, 1939 • • VOLUME 3 • • NUMBER 1

Food MAKES A DIFFERENCE

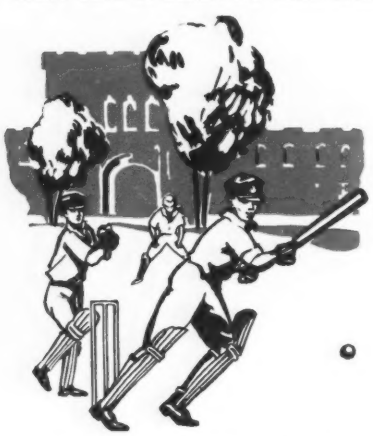
A TRUE STORY

Good nutrition is an international problem. England, participating in the League of Nations world-wide drive for good nutrition, has made an important contribution to the health of her own youth.

Let's just imagine that an English schoolboy of today could go back to the time when his father was in school. The son would find himself at least 12 pounds heavier and 2 inches taller than his father as a youth!

That's not just luck, either. He gets more and better food at boarding school than his father did. Much more than his great-great-great-great-great-great-grandfather was fed when he was in school! In 1704, the boys at Christ's Hospital school in England had very small meals—less than one-half as much as is now recommended for a growing boy. Only a little milk was served, and sometimes they had none for more than a week at a time. (Today they get milk from the school's own cows.)

Way back in 1666, the boys wanted more food so badly that, in spite of the disapproval of the governing board, they bought drink and food, called "tuck," from a "tuck-shop." One hundred years later, when great-great-grandfather was in school, the "tuck-trade" was organized so that the boys didn't have to sneak the extra food they craved and needed. "Tuck" is now sold at a well-equipped shop and is subject to the approval of the medical officer.



English boys drink milk to keep in condition for playing cricket.

For the last 20 years or so Dr. G. E. Friend, medical officer at this boys' school, has been keeping records of the growth and health of his students and of the food they eat.

Cricket, rugby football, and hare-and-hounds are among the strenuous games that have been played for many generations in England. As in football in the United States, broken and injured bones are often part of the enthusiastic playing of rugby. But they are less frequent today. Since 1922, more milk has been used and more butter has been eaten instead of substitutes. With improvement in meals, Dr. Friend says that the boys have fewer bone fractures and injuries.

Each boy of today drinks two and one-half times as much milk as the student of 20 years ago. And butter is increased by almost one-third.

English Students Drink Milk

Today, the plan known as the Milk-in-School Scheme helps all English boys and girls get good starts toward long and healthful lives. A half-pint of milk a day is available to any school boy or girl in Great Britain.

Approximately 3 million students are receiving milk under this Scheme. What difference does milk make? Here are just a few ways in which milk does make a difference. As students in England drink more nearly the amount of milk they should, the better they grow. Teachers and school medical officers add that children who drink milk are more alert, brighter and more cheerful, and attend classes more regularly than those children who do not drink milk.

And as a final suggestion, a look at the medical examinations in 1937 reveals that 9 out of 10 boys and girls were in excellent or normal nutritional condition—a great improvement over even just 5 years ago.

It's not just luck—it's MILK!

glances AT NUTRITION RESEARCH

From research studies such as those reported below we learn how human health may be improved through better nutrition.

VITAMIN B

An emulsion of percomorph liver oil in milk is approximately twice as effective in preventing and healing rickets as the oil given in orange juice. This conclusion is reached as a result of a study on 340 infants. The daily dosage of the various preparations ranged from 90 to 200 units.

VITAMIN C IN MILK

The ascorbic acid (vitamin C) content of milk has been found to be considerable. One recent study reports that a small loss, averaging only 18.71 per cent, occurs on pasteurization but the average amount of ascorbic acid in pasteurized milk is 13.27 milligrams per quart. As the human daily requirement is around 50 to 70 mg., milk can contribute significant amounts of ascorbic acid to the daily diet.

APPETITE

A well known physiologist says that appetite is an important aid to digestion, causing the discharge of digestive fluids into the stomach. Agreeable odors and flavors of foods produce this favorable condition as well as increasing the muscular tone in the stomach and intestines. The manner in which food is served is therefore an important factor in good nutrition.

VITAMIN NEEDS

The human requirements of vitamins have recently been summarized by a nutrition authority as follows:

The minimum daily requirement of vitamin B_1 (thiamin) is not less than 200 international units for the average adult; 400 to 500 units may be regarded as liberal. This is approximately 1 to 2 milligrams of thiamin.

The requirement of riboflavin (vitamin G) is 1 to 2 mg. per day. No international unitage has been established. For ascorbic acid (vitamin C) the requirement is 1000 to 1400 international units or 50 to 70 mg. per day.

A SCIENTIFIC STUDY

By Dr. Howard W. Haggard
Laboratory of Applied Physiology
Yale University

A study of the effects of between-meal feedings on the disposition and on absenteeism of workers was made in a large commercial office. The 120 women who served as subjects were divided into two general groups, one containing 40 and the other 80 members. The larger group was given milk and bananas in the mid-morning and mid-afternoon during the five-minute rest period that was already in practice. The smaller group received no supplementary feeding but served as the control group.

The feedings were furnished during alternate months over a period of five months. In each month in which food was given, the control group was changed so that at the end of the last month each subject had been once in the control group and twice in the feeding group. Absenteeism was recorded for each month of the experimental period and for the month preceding and following. The impressions of the employees as to the effect of the feedings on their dispositions and well-being were determined by questionnaires presented at intervals.

Supplementary feedings are part of the daily intake of food and as such should be chosen with the same care as the food of regular meals. For this reason, milk and bananas were chosen as the foods to be used in this study.

Effect of Supplementary Feedings

In each month of the study, the groups receiving supplementary feedings had a distinctly lower rate of absenteeism than the control group. In the months when no supplementary feedings were given, the rates of absenteeism for all groups were essentially the same. Expressed in days per 1000 man-days of working time, the average rate of absenteeism for the entire period of the study was 14.9 for the control group as compared with 9.1 for the group receiving food.

Replies to the four questionnaires issued during the period of the study established definitely the fact that the majority of the employees liked the supplementary feeding. Ninety-one per cent expressed a desire to have them continued.

Seventy-six per cent of the employees said that they felt better and that

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TIMELY Topics

White House Conference — The fourth White House Conference to consider child welfare in its national aspects will be held early in 1940—just ten years after the last similar conference. A planning committee met in Washington on April 26, 1939, at the White House. Delegates included representatives of all but two states and of Hawaii, Puerto Rico, and the District of Columbia.

The general purpose of the conference is to consider "Children in a Democracy"—to discuss current problems bearing on the welfare of children and to plan certain studies which will be made under the supervision of the Children's Bureau.

Borden Award—Dr. Icie G. Macy of the Research Laboratory of the Children's Fund of Michigan is the recipient of the 1939 Borden Award for outstanding research in the field of nutrition. Dr. Macy is a member of the American Institute of Nutrition. She is especially well known for her work on nutritional factors in pregnancy and childhood.

Vitamin B—The vitamin B complex is now known to be composed of ten different vitamins or factors, and the end is not yet in sight. The ten are: thiamin, riboflavin, nicotinic acid, the "spectacled eye" factor, pantothenic acid, the anti-gray hair factor, vitamin B_6, factor W, factor U, and vitamin M. How many and which of them, outside of thiamin, riboflavin and nicotinic acid, are essential in the diet has not been entirely settled.

A PRACTICAL PLAN

By Miss Agnes Larson
Supervisor of Home Economics
St. Paul Public Schools

Two nutrition clinics are maintained in the elementary schools of St. Paul. Undernourished children are selected by the classroom teacher, the school nurse and the school principal in consultation with the Nutrition Specialist. These children are then examined by the school and family physicians, and parental consent and promise of full cooperation are obtained. Classes are conducted monthly for the mothers, and lessons in nutrition are given weekly to the children.

Students of nutrition at the University of Minnesota do field work with the clinics, visiting homes, planning budgets and special diets, assisting in planning menus and market orders. A nutrition worker and school nurse make frequent home visits.

A balanced meal is served to the children at noon in the school, and other feedings are given during the day as recommended by the physician. In addition, rest periods throughout the day are arranged for those children who need a great deal of rest and for all the children in the clinic for 30 minutes following the noon meal.

Results Measured

To determine the kind and extent of improvement made by the children during one school year, observations were made on 40 children in two of the schools. At least once a week the children were observed during the noon hour and the results recorded. The amount of food eaten, the child's emotional adjustment, and his noted likes and dislikes were checked as they were detected.

The next step was to interview the mothers to determine the health practices of the children. Any relevant information was recorded. Teachers were given a check-list on which to indicate what changes the clinic had effected in the children, and bimonthly checks on growth charts were made by the nurse.

The results of the study indicate that the economic status of the family and the amount of home cooperation with the clinics are influential in determining the benefits of the nutrition clinics on the growth of undernourished children.

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—that milk products are used in the manufacture of automobiles? Among them are lactic acid, made from whey, which is used in lacquers and in shatter-proof glass.

—that for one voyage on the Queen Mary, the provisions include about 1,000 quarts of cream, 4,000 pounds of butter, 2,600 gallons of milk and varying quantities of about 18 types of cheese?

—that the production of cheddar cheese in the United States in 1938 was the largest on record? At least four-fifths of the cheese produced in this country each year is cheddar cheese.

—that Switzerland leads the world in per capita consumption of milk and cream? The United States is second.

—that Catherine de Medici introduced ice cream, in its earliest form, into France in 1550? The recipe for ice cream was brought from Asia by Marco Polo.

—that fresh milk in Uruguay is sold by driving cows from door to door along the streets, and milking them into jars brought out by the customers?

—that when Jacques Cartier's crew landed in Labrador in 1535 they were suffering from scurvy, which Indians treated with a decoction of spruce needles? This was a good source of vitamin C, although no one knew about vitamins then.

—that riboflavin (vitamin G) is the green coloring matter of milk whey? The riboflavin content of milk can be estimated by making this vitamin glow to a brilliant green color.

THINGS YOU'LL LIKE TO READ

NUTRITION AND DIET IN HEALTH AND DISEASE—by James S. McLester, M. D. W. B. Saunders Company, 1939. Third edition. $8.00.

Dr. McLester's book has been entirely rewritten. It is concerned both with the science of nutrition and with the practical aspects of diet. Dr. McLester is a recent past president of the American Medical Association and has long been an authority on diet in health and disease.

THREE MEALS A DAY—by Hughina McKay. Bulletin No. 133, Agricultural Extension Service, Ohio State University, Columbus, 1939. 2 cents.

Meal planning, menu suggestions and nutrition information are included in this booklet.

THE NEWER KNOWLEDGE OF NUTRITION — by E. V. McCollum, E. Orent-Keiles, and H. G. Day. New York: The Macmillan Company, 1939. $4.50.

Everyone who has used Dr. McCollum's book as a reference or text will welcome this new edition. It contains a wealth of up-to-date information on all phases of nutrition.

NUTRITION NOTES — Published monthly, September through June, by The Nutrition Bureau, Community Service Society, 105 E. 22nd St., New York City. 50 cents a year.

This newsy leaflet contains valuable nutrition information and stresses economy in food buying.

NEEDLESS NUTRITIVE FAILURE

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or physiologic strain. Increased exercise or anything else which hastens a person's metabolism, such as a febrile illness or hyperthyroidism, will add materially to these requirements, notably for vitamin B_1, so much so that under such circumstances an apparently healthy person living on the borderline of good nutrition may unknowingly drift into a state of serious nutritive deficiency.

The most important among the conditions of physiologic strain in a woman's life is pregnancy. The time when above all others a woman is in urgent need of an abundance of good food is when she is pregnant or is nursing her infant. The demands of her offspring are so pressing that she will deprive her own tissues in order to meet these demands; if at this time she is living in the twilight zone of nutrition and her diet is not adequately increased then she is apt gradually and insidiously to experience nutritive failure with its many unhappy results. Deficiencies originating in this manner are not infrequent.

The solution of this problem, as of many others, is education. When the value of an abundant, well-balanced diet which includes all of the protective foods, notably milk, is more widely appreciated, when the hazards of those borderline states in which nutrition is barely adequate are better understood, and when people are sufficiently interested to avail themselves of this knowledge, then the frequency of dietary deficiency will be greatly lessened and the nutritive state of the nation will be vastly improved.

A SCIENTIFIC STUDY

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they were less tired and nervous during the months when feedings were given.

Many of the employees commented on an improvement in disposition. It has long been a common observation that one of the accessory phenomena of hunger is irritability. Supplementary feeding assists in preventing this change in disposition which is particularly marked in certain individuals.

A PRACTICAL PLAN

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The number of children getting less than three cups of milk daily was reduced from 43% to 17% by the end of the study. One-third of all dislikes for food were overcome, and many children learned to eat new foods. Scholarship improved in 53% of the cases, attentiveness in 56%, and posture in 66% of the group. The degree of exitability and the incidence of colds were also considerably reduced.

Note—A mimeographed sheet containing references to all major items mentioned in NUTRITION NEWS may be obtained on request from the National Dairy Council, Chicago, Illinois.